

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-3. (canceled)

4. (new) A vapor heat apparatus for killing insects or eggs on fruits, the apparatus comprising:

- a fruit processing chamber housing fruit storage units for storing fruits;
- air conditioning chambers provided with a heater and fan, each air conditioning chamber arranged in communication with one of the fruit storage units;
- air circulation units for independently and forcedly blowing air through each fruit storage unit, each air circulation unit including means for supplying an amount of saturated vapor, means for sensing a fruit temperature at the center of the fruits, means for sensing a temperature of the air and means for sensing a relative humidity of the air; and
- means for independently controlling the relative humidity in each of the fruit storage units by controlling the amount of vapor supplied and a heat exchanging rate of the heater in response to signals received from the means for sensing the fruit temperature.

5. (new) The vapor heat apparatus of claim 1 each air conditioning unit receives air from a respective fruit storage unit and conditions the air before the air is drawn back into the respective fruit storage unit and is circulated by a respective air circulation unit.

6. (new) The vapor heat apparatus of claim 2 wherein each air conditioning unit includes a fan for drawing the air into the air conditioning unit and for forcing the air into the respective fruit storage unit.

7. (new) The vapor heat apparatus of claim 1 wherein the heater and the means for supplying vapor to a first fruit storage unit are controlled in reference to sensed signals of the means for sensing the fruit temperature such that when the fruit temperature in the first fruit storage unit is lower than the fruit temperature in a second fruit storage unit the relative humidity of the air in the first fruit storage unit is raised to cause the fruit temperature therein to rise.

8. (new) The vapor heat apparatus of claim 4 wherein the relative humidity in the first fruit storage unit is raised relative to the relative humidity in other fruit storage units only when a difference between the fruit temperature in the first fruit storage unit and the fruit temperature in a specified fruit storage unit exceeds a certain value.

9. (new) The vapor heat apparatus of claim 5 wherein the specified fruit storage unit is the fruit storage unit containing the fruit having the highest fruit temperature.

10. (new) The vapor heat apparatus of claim 1 wherein the means for independently controlling the relative humidity in each of the fruit storage units provides for raising the fruit temperature of fruit having a low fruit temperature without raising the fruit temperature of fruit having a high fruit temperature.

11. (new) A vapor heat apparatus for killing insects or eggs on fruit, the apparatus comprising:

- a fruit processing chamber;
- first and second fruit storage units positioned within the chamber for storing fruits therein, each storage unit having a fruit temperature sensor;
- first and second air conditioning chambers, the first air conditioning chamber communicating only with the first unit and the second air conditioning chamber communicating only with the second unit, each air conditioning unit having a temperature sensor, a relative humidity sensor, a heater and a vapor supply;
- a controller which activates the vapor supply in a respective air conditioning chamber to supply an increased amount of vapor if the fruit temperature in the respective fruit storage unit is lower than the fruit temperature in the other fruit storage unit.

12. (new) The vapor heat apparatus of claim 8 wherein the controller activates the heater in the respective air conditioning chamber when the vapor supply is activated to control the relative humidity therein.

13. (new) The vapor heat apparatus of claim 8 wherein the controller activates the vapor supply when a difference between the fruit temperatures exceeds a certain value.

14. (new) The vapor heat apparatus of claim 8 wherein the fruit temperature in the respective fruit storage unit is raised without raising the fruit temperature in the other fruit storage unit.

15. (new) A vapor heat apparatus for killing insects or eggs on fruits, the apparatus comprising:

- a fruit processing chamber housing fruit storage units for storing fruits, the fruit processing chamber including means for supplying vapor into the air, means for sensing a temperature of the air and means for sensing a relative humidity of the air;
- air conditioning chambers provided with a heater and fan and arranged in communication with the fruit processing chamber;
- sensors for sensing a fruit temperature at the center of the fruit, a sensor positioned in each fruit storage unit;
- fruit storage unit fans independently drawing air from the fruit processing chamber through each fruit storage unit, each fruit storage unit fan positioned in a respective fruit storage unit; and
- means for independently controlling each fruit storage unit fan such that a delayed increase in fruit temperature in a first fruit storage unit causes the respective fruit storage fan to feed an increased amount of vapor into the first fruit storage unit to raise the fruit temperature of the fruits therein.

16. (new) The vapor heat apparatus of claim 12 wherein the increased amount of vapor is drawn into the first fruit storage unit only when a difference between the fruit temperature in the first fruit storage unit and the fruit temperature in a specified fruit storage unit exceeds a certain value.

17. (new) The vapor heat apparatus of claim 13 wherein the specified fruit storage unit is the fruit storage unit containing the fruit having the highest fruit temperature.

18. (new) The vapor heat apparatus of claim 12 wherein the means for independently controlling each fruit storage fan provides for raising the fruit temperature of fruit having a low fruit temperature without raising the fruit temperature of fruit having a high fruit temperature.

19. (new) A vapor heat apparatus for killing insects or eggs on fruits, the apparatus comprising:

- a fruit processing chamber including a vapor supply, a temperature sensor and a relative humidity sensor;
- air conditioning chambers provided with a heater and fan and arranged in communication with the fruit processing chamber;
- first and second fruit storage units positioned within the chamber for storing fruits therein, each storage unit having a fruit temperature sensor and a fan for independently drawing air from the fruit processing chamber through the fruit storage unit; and
- a controller which activates the fan in a respective fruit storage unit to draw in an increased amount of vapor if the fruit temperature in the respective fruit storage unit is lower than the fruit temperature in the other fruit storage unit such that the fruit temperature in the respective fruit storage unit is raised.

20. (new) The vapor heat apparatus of claim 16 wherein the controller activates the fan in the respective fruit storage unit when a difference between the fruit temperatures exceeds a certain value.

21. (new) The vapor heat apparatus of claim 16 wherein the fruit temperature in the respective fruit storage unit is raised without raising the fruit temperature in the other fruit storage unit.